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DEPARTMENT OF HEALTH FOR SCOTLAND

Report of the Committee to Consider
the Future Numbers of Medical
Practitioners and the Appropriate
Intake of Medical Students

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To: The Rt. Hon. DENNIS VOSPER, T.D., M.P., Minister of Health,
The Rt. Hon. JOHN S. MACLAY, C.M.G., M.P., Secretary of State for
Scotland.

SIRS,

I. INTRODUCTION

Appointment and terms of reference

1. We were appointed by the Minister of Health and the Secretary of State for Scotland in February, 1955, with the following terms of reference:

"To estimate, on a long term basis and with due regard to all relevant considerations, the number of medical practitioners likely to be engaged in all branches of the profession in the future, and the consequential intake of medical students required."

Procedure

2. We held our first meeting on 24th March, 1955, and shortly afterwards issued a press notice inviting all interested persons and organisations to submit written statements of evidence. In addition, specific invitations were sent to a large number of organisations known to have an interest in the questions before the Committee. A list of the organisations and persons who have submitted written and, in some cases, oral evidence is shown at Appendix 1. We take this opportunity to express our great appreciation of the assistance they have given us.

3. In all we have held thirteen meetings. At four of these we received oral evidence.

4. We wish to record the excellence of the service given throughout our enquiry by our Secretary, Mr. Philip Muston, of the Ministry of Health. The organisation of this enquiry and in particular the co-ordination of the evidence called for much industry and skill, and our Secretary's assistance has also been of great value in the preparation of our Report. We wish too to mention the good service given first by Mr. G. G. Hulme and in the later stages of our enquiry by Mr. T. E. Nodder, both of the Ministry of Health, as assistants to Mr. Muston.

Scope of our review

5. Our terms of reference required us to make estimates which would cover not only the National Health Service but all branches of medical practice and we took the view that these estimates should relate to the requirements of England, Scotland and Wales. It was also clear that we should have to take account, first, of the doctors who, having qualified in Great Britain, make their careers overseas, as emigrants to the self-governing countries of the Commonwealth, in the colonial medical services and in medical missionary work and, second, of the doctors who settle and practise in Great Britain having been trained elsewhere. All our estimates are on a peacetime basis; we have not attempted to assess wartime needs.

Background to our appointment

6. It is clearly important to ensure that the number of new recruits entering medicine is sufficient but not in excess of requirements at a time when expanding demands upon the limited pool of suitable young men and women are being made by other professions especially teaching, science and engineering. Two quite different points of view have been expressed to us on the required number of doctors for future needs. The first is that if the medical services available in this country are to be adequately manned and as comprehensive and rapidly expanding as they should be, then too few

doctors are being trained. The second and opposing point of view, which has perhaps been heard more often in recent years, is that too many doctors are now being trained so that in future the number of doctors is likely to exceed the number of available positions. This idea may have sprung from the undoubted difficulties being experienced by some trainees in certain branches of practice (e.g. General Medicine and General Surgery) in obtaining posts as consultants and from the amount of competition for advertised general practice vacancies in some parts of the country. It may also have arisen partly from the fact, to which we refer later in our Report, that opportunities for medical employment overseas are diminishing. Perhaps, too, some young doctors today expect to establish themselves rather more quickly than their predecessors found possible.

7. The burden of the evidence which we have received has shown us that, though the scope for further expansion is not without limits, there are as yet no signs that those limits have been reached or that there is already a surplus of doctors with a consequent risk of substantial unemployment. We were confirmed in our view when we read of the investigation⁽¹⁾ carried out by Dr. L. S. Potter, M.B., Ch.B., Medical Director of the Medical Practices Advisory Bureau of the British Medical Association, into the circumstances of doctors registered with the Bureau as seeking professional work, almost entirely in general practice. This investigation is, so far as we are aware, the only factual study throwing any light on the extent of unemployment amongst doctors. In 1955, 1,075 doctors who were registered with the Bureau were circularised and of these 82 (8 per cent) said they were unemployed at the time; in 1956, 947 doctors were circularised and 87 (9 per cent) said they were unemployed. Of the 82 doctors who said they were unemployed at the time of the 1955 enquiry, only 2 said they were unemployed at the time of the 1956 enquiry. These figures show that even in a group of doctors where the level of unemployment might have been expected to be high, it was in fact low. This suggests that the amount of unemployment in the profession as a whole is very small. In any profession there are a number of qualified persons who for one reason or another have difficulty in finding employment and there is no reason to suppose that the medical profession is any exception; but the foregoing figures suggest that the "hard core" of unemployed doctors is insignificant.

Description of our task

8. Our task can be divided into three main parts. First, there is the determination of the existing number of doctors in Great Britain and the estimation of the numbers required to offset future losses by death and retirement. Second, there is the assessment of the expansion likely to occur in the several fields of medical practice (including the satisfaction of existing shortages and deficiencies) and the estimation of the numbers of additional doctors required to meet this expansion. Third, there is the estimation of the number of students required to enter medical schools in order that the number of qualified doctors leaving the schools may meet the estimates made under the first and second headings. As already mentioned, due account must be taken of the doctors from overseas who settle and practise in Great Britain and of those doctors from this country who make their careers overseas.

9. It will be obvious that precise estimates are impossible. There are many uncertainties, for which we can do no more than make the best possible assessment. There are also many imponderables, mentioned later, for which we can make no allowance of any kind.

(1) British Medical Journal. 5th November, 1955 and 15th September, 1956.

Period covered by our estimates

10. Our terms of reference require us to make a forecast "on a long term basis" and this is an aspect of our task which has given us a good deal of difficulty. The output of the medical schools has fluctuated considerably from year to year in the past; this must obviously affect the incidence of losses, by death and retirement, from the doctor population in future years. Estimates for a very restricted period ahead might therefore encourage erroneous inferences as to the position in the longer term. On the other hand, the pattern and speed of development of the medical services have been much influenced by the changing social and economic circumstances of the country following the Second World War and in particular by the advent in 1948 of the National Health Service which has, as yet, hardly emerged from the formative stages. The experience of recent years cannot be expected to continue indefinitely and it is extremely difficult at the present time to discern what the position is likely to be a considerable number of years hence. After much thought we decided that we could take our estimates of the number of doctors likely to be employed in Great Britain to 1971 but no further. This date is ten years beyond that up to which the output of graduates from medical schools has already been determined by the numbers of students now at various stages of their training. The potential effect of the uncertainties and imponderables to which we have referred becomes progressively more important the further we extend our estimates into the future and for this reason our estimates for the later years of the period we have covered should be regarded with even more caution than those for the earlier years. It will be for consideration by the authorities concerned whether a further review of needs for doctors and medical students should be set in motion towards the end of the period which is dealt with in our Report.

II. NUMBER OF DOCTORS IN GREAT BRITAIN IN JUNE 1955 AND ESTIMATED NUMBER REQUIRED TO OFFSET LOSSES BY DEATH AND RETIREMENT

11. In order to make the estimates required by our terms of reference we needed to know not only the total number of doctors at present engaged (whether whole-time or part-time) in civilian practice in Great Britain, but also their distribution by sex and age, together with similar particulars for retired doctors. Detailed information of this kind was not readily available either from the Medical Register maintained by the General Medical Council or from the Medical Directory. Nor was it practicable to collect the information from employing authorities; no complete list of these exists and, moreover, since some doctors have more than one employer, the aggregation of particulars obtained in this way would have resulted in an unknown number of doctors being counted more than once. In any case, many doctors have no employer. Thus at the very outset of our enquiry we were confronted with an awkward statistical problem.

12. For the purpose of an official scheme for recording the manpower resources available in an emergency, the British Medical Association maintains a register of all doctors in Great Britain, except those in the Armed Forces. The register contains particulars of sex and age and includes retired as well as active doctors. About 80 per cent of the entries in the register were assembled from information supplied individually by doctors in 1951, the remainder being derived from the Association's own records. The register is kept up to date by the addition of the names of doctors newly qualified or newly arrived in the country and the deletion of the names of those who have died or left the country.

It was evident, therefore, that the register was a valuable source of information for our purposes. The Association readily agreed to a count of it being made available to us and this was undertaken by the officers of the Association and the statistician of the Ministry of Health. It should perhaps be mentioned here that the information given to us in this way was exclusively statistical and included nothing about individual members of the profession.

13. The count was made of the numbers on the British Medical Association's register on the 15th June, 1955, according to sex and age-group, and, excluding overseas postgraduate students and doctors on leave from overseas, yielded a total of some 60,800. Of these, 55,600 were recorded as active and 5,200 as retired. About 3 per cent of the active doctors were recorded as spending only part of their time in medical practice; but as the medical work of the country will always be spread over a somewhat larger number of doctors than would be required if all were employed whole-time, the "part-time" cases should clearly be counted in full in any assessment of future recruitment requirements.

14. We see no reason to question the accuracy of the over-all count of the register or of the subdivision of the total of 60,800 according to sex and age; but as our enquiry proceeded we found it difficult to reconcile the register figure for active doctors with the statistics of the numbers engaged in the various branches of the profession which were supplied to us in evidence from other sources. The comparison suggested that the register total of 55,600 for active doctors might contain a number of doctors who had, in fact, ceased to practise; and it was not difficult to see why this might be so. As we have already indicated, the purpose of the register is to maintain a running record of the number of civilian doctors who would be available in an emergency. For this purpose, it is clearly essential that intake from all sources and losses by death or migration should be promptly and accurately recorded; but it would not appear to be necessary to complicate the arrangements for keeping the register up to date in these respects with machinery for ascertaining the date when a doctor who, while continuing to reside in Great Britain (in many cases, no doubt, at the same address), ceases to practise. Indeed, such a doctor may well consider himself as still available in an emergency. The count of the register did, as we have already indicated, yield a substantial number of doctors whose retirement had been noted; but it is natural to suppose that in this respect the records are subject to a time-lag which may be not inconsiderable. It will be clear from what we have said above that in recording this view we do not in any way impugn the efficiency of the register for the purpose for which it was set up.

15. We accordingly decided to make an independent estimate of the numbers of active doctors included in the register total of 60,800 (49,400 men and 11,400 women). In the case of men, we obtained this estimate by multiplying the total numbers in each age-group by "proportions active" derived from the numbers of occupied and retired men doctors recorded in the 1951 population census. This gave a total of 44,960 active doctors in 1955. We could not adopt this course for women because of the inherent probability that many women who withdrew from the profession on marriage to take up home duties were included in the census under this heading and not as retired doctors. We accordingly made our estimate of the number of active women doctors in 1955 by applying, to the estimated number of active men doctors in each age-group at that date, ratios based on the relative numbers of active men and active women doctors in the 1951 and earlier population censuses. The result of this calculation was to subdivide the register count of 11,400 women into 8,300 active and 3,100 retired, so that our estimate of the number of active doctors of both sexes in 1955 is 44,960 plus 8,300, viz., 53,260.

16. This estimate is about 2,600 greater than the total obtained by adding together the figures given to us in evidence from other sources. We are aware, however, that there are a number of groups of men and women with medical qualifications in respect of whom we have received no statistical evidence, and as these form part of the intake of the profession from the medical schools it is right to include them (irrespective of the nature or the extent of their present occupations) in our calculations. They include doctors practising as dentists; the medically-qualified staffs of medical organisations and journals; and those who are acting as locums. From a study of the occupational particulars in the British Medical Association register we believe the total number in these categories to be about 800. We have little doubt that the remaining 1,800 could be fully accounted for if it were possible to obtain particulars of doctors who undertake some part-time medical work in hospitals and local authority clinics and on medical boards, but are not included in the statistical returns of any employing authority. We believe that most of this work is done by women doctors who are mainly occupied in their own homes as wives and mothers; indeed, the memorandum of evidence put before us by the Medical Women's Federation contained some particulars of the extent of part-time employment among a sample of women doctors which, if representative of women in the profession generally, would appear to indicate that one woman doctor in every four or five is engaged in this kind of work.

17. We do not claim precise accuracy for our estimate of 53,260 active doctors in 1955, but we feel confident that it provides a reasonably firm basis for our calculations. The figures for both active and retired are given in more detail in Appendix 2, together with "proportions active" for each age-group. These proportions are needed as a substitute for the rates of retirement which would normally be used in making the estimate of wastage which is the next step in our calculations.

18. Even if they had been available, rates of retirement derived from the experience of a past period could not have been used to estimate the numbers of retirements in the future. The great majority of doctors are now subject to the provisions of the National Health Service Superannuation Scheme which came into operation in July, 1948. Generally speaking, to qualify for pension under this scheme a doctor must have contributed for at least ten years, so that although he may already be eligible for retirement so far as age is concerned he cannot obtain superannuation benefits before July, 1958, at the earliest. The scales on which these benefits are calculated differ as between general practitioners and hospital staff, but in either case the amount of pension obtainable in 1958 and for many years thereafter will be small in relation to annual remuneration in active service.

19. It will be seen from Appendix 2 that at the present time many elderly doctors are still practising their profession. It seems reasonable to suppose that with the steady accrual of pension rights under the N.H.S. Superannuation Scheme the "proportions active" in the older age-groups will show a gradual decline. In an attempt to assess the likely extent of this decline we have had recourse to such statistics relating to other professions as are available from the 1951 population census. When we were considering the problem the full occupational data from the England and Wales census had not been published, but some information was forthcoming from the volume entitled "Census 1951. Great Britain One per cent Sample Tables, Part 1". From this source we have compiled the following table which, while limited in scope, is of some relevance to our enquiry. The figures relate to men only.

TABLE 1

Proportions active in professions at different ages

Percentage ratios of "numbers occupied" to "numbers occupied and retired"

Occupational group	Age Group		
	60-64	65-69	70 and over
(i) Administrators, directors, managers	85	56	37
(ii) Farmers, farm managers... ..	87	57	38
(iii) Professional and technical (other than teachers, and excluding clerical staff)	87	60	34
(iv) Persons engaged in finance and insurance (excluding clerical staff)	65	36	18
(v) Teachers	72	26	9
Doctors (see Appendix 2)	88	69	37

A difference in the pattern of the figures will be observed between groups (i)-(iii) (largely self-employed and employers) on the one hand and groups (iv) and (v) (mainly salaried employees) on the other. As regards group (iv) it is well known that the staffs of banks and insurance companies are, generally speaking, covered by pension schemes, and the overwhelming majority of the teaching profession (group (v)) are within the scope of the Teachers' Superannuation Acts. As to the other three groups, no doubt some members of groups (i) and (iii) at any rate are subject to organised superannuation arrangements; nevertheless it seems eminently reasonable to suppose that the higher proportions active in these three groups are due in large measure to a less widespread provision for pensions than is enjoyed by the members of groups (iv) and (v). Except in the age-group 65-69 the figures for doctors are much the same as those for groups (i)-(iii).

20. It need hardly be said that any set of prospective "proportions active" for doctors which may be inferred from these data will not only be highly speculative, but must relate not to the immediate future, but to the time when the N.H.S. Superannuation Scheme has reached a state of maturity. Entry to the medical profession is normally at about age 24-25, and the normal pensionable age under the scheme is 65. The scheme can hardly be deemed to have matured until a newly qualified doctor entering the scheme at its inception in 1948 has reached pensionable age; this will be in or about 1988.

21. We incline to the opinion that the average doctor is sufficiently attached to his profession to wish to continue in practice as long as his health and energy will allow. One or two of our witnesses to whom we put the point did not dissent from this view. There is also the very practical consideration that as, in the average case, a doctor does not begin to earn his pension until he has reached the middle twenties he is likely, for purely financial reasons, to wish to defer his retirement correspondingly. Further, in a community which is progressively ageing, the encouragement of a tendency towards later retirement has become a matter of public policy. For all these reasons we think that the proportion of doctors who retire before age 65 will always be fairly small, and we consider it a reasonable guess to assume, for the age-group 60-64, an ultimate "proportion active" of 80 per cent. At the later ages we consider it justifiable to have more regard to the experience of groups (iv) and (v) as shown in the table in paragraph 19; for the age-groups 65-69 and 70 and over we have assumed "proportions active" of 35 per cent and 15 per cent respectively.

22. We were not able to make a similar analysis for women, and "proportions active" for 1988 have been obtained by assuming that they will bear roughly the same ratio to the 1955 proportions as in the case of men. The figures so arrived at are 55 per cent (ages 60-64), 25 per cent (ages 65-69) and 10 per cent (ages 70 and over).

23. We have predicted "proportions active" for the intervening years between 1955 and 1988 on the assumption that movement from the present to the ultimate figures will be smooth and regular. A number of witnesses have called our attention to the special circumstances regarding superannuation which will arise in July, 1958, to which we have already referred in paragraph 18 above; but none of them was prepared to give a firm opinion as to how great the flow of retirements immediately after that date was likely to be. In our view, the small pension obtainable in 1958 hardly seems sufficient to induce anything like a mass exodus in that year. No doubt there are at the present time a number of doctors who are deliberately deferring their retirement until they become eligible for benefit under the superannuation scheme, so that the numbers retiring in the two or three years prior to July, 1958, may be rather smaller, and the numbers retiring in the two or three years subsequent to that date rather larger, than would otherwise have been the case. But we cannot attempt to chart the course of events in every individual future year—our calculations throughout have been made on the basis of five-year averages; and we are not disposed to think that the temporary disturbance in the flow of retirements which may occur in and around 1958 will be sufficient to throw the "proportions active" in 1960 out of the smooth and regular alignment to which we have referred at the beginning of this paragraph.

24. The "proportions active" shown in Appendix 2 for ages under 60 reflect the extent to which doctors cease to practise, temporarily or permanently, on account of ill-health and—in the case of women—on marriage. We think it unlikely that these proportions will be appreciably affected by the operation of the superannuation scheme, and we have assumed that the proportions for 1955 are equally applicable to future years.

25. Having reached these conclusions in regard to the future course of retirements, we were in a position to ask the Government Actuary's Department to estimate, in respect of successive five-yearly periods from 1955, the number of new doctors required to maintain the population of active doctors at the 1955 figure. A memorandum from the Department on this matter is given in Appendix 3, from which it will be seen that up to 1975 the numbers required for replacement purposes, starting from mid-1955, are estimated as follows:—

<i>Period</i>					<i>Required annual average intake</i>
1955-1960	...	...	...	...	1,150
1960-1965	...	...	...	...	1,180
1965-1970	...	...	...	...	1,230
1970-1975	...	...	...	...	1,260

26. It will be observed that the calculations have been based on the whole population of doctors, without regard to the nature of their employment. This was unavoidable for several reasons. Doctors change their jobs; the junior house officer may eventually become a specialist or a general practitioner, and results obtained by assuming that he continues indefinitely in his present employment would be meaningless. In any case no analysis of retired doctors by reference to their former occupation is available, so that the "proportions active" could not have been calculated on an occupational basis. Further, even if this had been possible, the conjectural element in the calculations would have been considerably increased if an attempt had been made to formulate future retirement patterns for each branch of the profession separately. Moreover, speculations on a sectional basis would be liable to be completely upset by future changes in relative demand for different types of doctor.

III. LIKELY EXPANSION OF MEDICAL EMPLOYMENT IN GREAT BRITAIN

General

27. In the paragraphs which follow we attempt to estimate the extent to which the numbers engaged in certain important fields of medical work are likely to increase, by 1971, above the numbers in June, 1955. The estimates are based on recent trends and on the evidence given to us. We must here again emphasise that our estimates cannot be precise calculations and are bound to be speculative. Quite apart from the uncertainties which are inseparable from any attempt to forecast figures there are many imponderable factors which may in future exercise a significant influence on the numbers of doctors. We have in mind here such things as changes in medical techniques and therapeutic methods and the introduction of new therapeutic drugs and materials, as well as changes in the incidence of disease and injury and in the general standard of health of the community. There may be changes in the methods of medical education and in the organisation of the health services. Furthermore, at any particular time the number of doctors employed in the National Health Service must depend on its size and scope and so, ultimately, on the amount of the country's resources allocated to it. We gave consideration to these factors during the course of our deliberations but came to the conclusion that they are so unpredictable that in estimating the future number of doctors the right course was for us to make no allowance for them one way or the other.

General Practice

28. General practice is the biggest single field of employment in the medical profession. Between July, 1948, and July, 1955, the number of principals in general practice in the National Health Service in Great Britain increased from about 19,450 to about 21,350, an increase of roughly 10 per cent. (These figures exclude doctors who provide only maternity medical services or who for one reason or another have limited lists, e.g. hospital doctors who have a list consisting only of the staff of the hospital.) A large part of this increase occurred between 1952 and 1954 following the acceptance of the recommendations of the Working Party on the distribution of the Central Pool from which general practitioners are paid. Amongst these recommendations were two which helped to increase the number of principals. One was that the number of patients whom a principal might accept on his list under the National Health Service should be reduced from:—

- (a) 4,000 to 3,500 for a single-handed practitioner,
- (b) 5,000 to 4,500 for a member of a partnership (for which the average for all the principals in the partnership must not exceed 3,500), and
- (c) 2,400 to 2,000 in respect of the employment of an assistant.

The second gave financial encouragement to the formation of partnerships by permitting doctors in partnerships to receive the 10s. loading paid on all patients in excess of 500 and up to 1,500, in the manner most advantageous to them irrespective of the actual division of patients between their lists.

29. Under the terms of the National Health Service Acts the bodies responsible for the supervision of the distribution of doctors in general practice are the two Medical Practices Committees, one for England and Wales and one for Scotland. In England and Wales the Committee have, since 1952, listed all areas of the countries into three groups: the "Designated" group which is composed of areas where the average number of patients on

each principal's list exceeds 2,500; the "Intermediate" group where the average number of patients on each list lies between 2,500 and 1,500; and the "Restricted" group where the average list is below 1,500. These dividing lines are not rigid and some flexibility is introduced in that when classifying an area the Medical Practices Committee take account of the work being undertaken by the general practitioners for hospitals, local authorities, industrial medicine, sessional work for government departments (e.g. Ministry of Pensions and National Insurance) and private practice. Account is also taken of the amount of mileage, the average number of temporary residents and the number of patients for whom certain doctors provide dispensing services. In "Designated" areas it is accepted that more doctors are needed and a doctor setting up in single-handed practice in such an area can qualify to receive from the Executive Council an "Initial Practice Allowance". In "Restricted" areas applications to set up new practices are refused by the Committee. In "Intermediate" areas it is regarded as necessary neither to attract additional doctors nor to take steps to restrict their entry, so no initial practice allowance is payable nor is any application to open a new practice normally refused.

30. The table below shows in relation to these three groups of areas the improvement in the distribution of doctors which occurred between 1952 and 1955.

TABLE 2

Distribution⁽¹⁾ of Principals in England and Wales, July, 1952-July, 1955

	July	Designated areas	Intermediate areas	Restricted areas	All areas
Number of principals	...				
	1952	7,596	8,496	1,180	17,272
	1953	5,983	10,861	1,200	18,044
	1954	4,224	12,863	1,426	18,513
	1955	3,671	13,862	1,284	18,817
Number of patients in 1,000's.	1952	21,660	18,546	1,866	42,072
The figure in brackets is the percentage of the total.		(51.5)	(44.1)	(4.4)	
	1953	16,313	23,711	1,913	41,937
		(38.9)	(56.54)	(4.56)	
	1954	11,578	28,660	2,205	42,443
		(27.3)	(67.5)	(5.2)	
	1955	10,044	30,911	1,995	42,950
		(23.4)	(72.0)	(4.6)	
Average number of patients per principal.	1952	2,851	2,184	1,581	2,436
	1953	2,726	2,183	1,594	2,324
	1954	2,741	2,228	1,546	2,293
	1955	2,736	2,229	1,554	2,283

It will be seen that in 1952 the "Designated" areas (i.e. areas with an accepted shortage of doctors) contained more than half the patients; only three years later the increase in the number of principals in those areas had brought about the reclassification of many of them as "Intermediate" with the result that the remaining "Designated" areas contained less than one quarter of the patients. The net increase in the total number of doctors (principals and assistants) in general practice is less than the 1,545 suggested by the Table above because over a similar period the number of assistants (including trainees) fell by over 200.

⁽¹⁾ From annual reports of Ministry of Health. Doctors with limited practices are excluded.

31. The table below shows how in 1955 "Designated" areas were distributed between rural and non-rural parts of the country.

TABLE 3
Number⁽¹⁾ of patients in "Designated" areas in England and Wales, July, 1955

	Total Number (in 1,000's)	Average Number per Principal
Rural areas	628	2,595
Non-rural areas	9,416	2,746

It will be seen that the great majority of the patients in under-doctored areas live in non-rural localities. Examination of the geographical distribution of the under-doctored areas shows that most were in northern and industrial areas.

32. The Scottish Medical Practices Committee have not adopted the threefold classification followed in England and Wales as there are no areas regarded as having an excess of resident doctors. The Committee do, however, maintain a list of areas which they consider to be under-doctored because the average number of patients on each doctor's list is in excess of 2,500. In Scotland, too, there has been an improvement in the distribution of doctors to an extent which has reduced the number of "listed" areas from 49 in 1949 to 23 in 1955. The table below shows the details since 1952.

TABLE 4
Distribution⁽²⁾ of Principals in Scotland, October, 1952–October, 1955

		"Listed" Areas	Other Areas	All Areas
Number of principals ...	1952	228	2,129	2,357
	1953	168	2,274	2,442
	1954	154	2,340	2,494
	1955	190	2,333	2,523
Number of patients in 1,000's. The figure in brackets is the percentage of the total.	1952	656 (13·4)	4,233 (86·6)	4,889
	1953	480 (9·8)	4,403 (90·2)	4,883
	1954	435 (8·8)	4,495 (91·2)	4,930
	1955	521 (10·5)	4,461 (89·5)	4,982
Average number of patients per principal.	1952	2,875	1,989	2,074
	1953	2,855	1,936	2,000
	1954	2,825	1,921	1,977
	1955	2,740	1,912	1,975

33. General practice differs from the other main fields of medical practice in that there is no authority which determines the number to be employed at any time in any area or the rate at which the numbers shall be increased in that area. Apart from the relatively few "Restricted" areas, the whole country is open to doctors who choose to enter general practice. For this reason there is even greater difficulty in estimating future numbers in this field than elsewhere.

34. We observed that over England and Wales as a whole the average number of patients per doctor's list had fallen steadily since 1952 and in 1955 had reached 2,283. There is known to be, by reason of duplication, some inflation of the total number of patients on doctors' lists and allowing for this the figure of 2,283 did not seem to us to be unreasonably high under present conditions. We felt, however, that it was unrealistic to look only at averages when they conceal wide variations in actual sizes of list. While Table 2 shows that the distribution of doctors is slowly improving, this is a

⁽¹⁾ Ministry of Health Report for 1955. Part I. Cmd. 9857.

⁽²⁾ Figures provided by the Department of Health for Scotland. Doctors with limited practices are excluded.

slow process depending mainly on the death or retirement of doctors in the well provided areas and the entry of young doctors into the areas where lists are large. A problem of maldistribution thus remains and we thought that we ought to budget for an increase in the total number of general practitioners large enough to effect an early and material improvement. We considered that on this footing a realistic estimate of likely expansion over the next few years would be the number of additional principals required to reduce the average number of patients per list to 2,500 in non-rural areas where the average at July, 1955 was in excess of that number, and similarly to 2,000 in rural areas. When choosing these two figures we took note of the fact that the Medical Practices Committee (England and Wales) regard areas as under-doctored if the average number of patients exceeds 2,500. We have adopted this figure for non-rural areas. In rural areas, however, patients are more scattered and we felt that some allowance ought to be made for this circumstance. For such areas we have, for the purpose of our calculations, adopted the figure of 2,000. We have calculated that in July, 1955 about 600 additional principals were required to achieve these averages. The addition of the increase in the number of doctors in under-doctored areas in Scotland to which the evidence we received seemed to point, brings this figure up to 625 for Great Britain as a whole.

35. We have also thought it necessary to make some provision in our estimates for the fact that the population of this country continues to increase year by year and is steadily growing older. The latest published forecasts of the Government Actuary indicate that during the period of sixteen years covered by our estimates the total population at all ages is expected to increase by about 4½ per cent and the number of elderly persons (ages 65 and over) by about 25 per cent. Some information regarding the extent to which the need for medical attention varies with age is given in the report (23rd February, 1954) of the Committee on General Practice within the National Health Service (usually referred to as the Cohen Committee) set up by the Central Health Services Council, and in the General Register Office booklets numbers 7 and 9 (June, 1953 and September, 1955) in the series "Studies on Medical and Population Subjects". After considering this in relation to the population forecasts referred to above we decided, as a reasonable provision for the effect of population changes, to allow in our estimates for an annual increase of 75 in the number of general practitioners.

36. Apart from the allowances just discussed, we also gave considerable thought to the likelihood of any change in the average number of items of service given by a general practitioner each year to each of his patients. The evidence we were able to secure on this point was, however, meagre and conflicting. In the absence of any discernible trend we decided to make no additional allowance one way or the other for this possibility.

Maximum size of doctors' lists

37. In paragraphs 30 to 32 we have shown average numbers of patients per principal but we recognise that these averages conceal wide variations in the number of patients served by individual principals—variations between old-established practitioners and beginners and between practices in densely populated urban areas and those in thinly populated rural areas. Representations were made to us by several organisations that the maximum size of lists should be reduced below the present limits set out in paragraph 28, but we did not think that it was within our terms of reference to make recommendations on this point. We have noted the statement made in

paragraph 42 of the Report of the Committee on General Practice within the National Health Service set up by the Central Health Services Council—

“Although the Committee is fully alive to the implications of the varying capacity and zest for work of different doctors, it thinks that as a safeguard against possible abuse and also as a means of securing improvement in the distribution of general practitioners, there must be an upper limit applied to doctors’ lists. Since the setting up of the Committee there has been a reduction in these limits to 3,500 for a principal, plus 2,000 where an assistant is employed. In the Committee’s view these figures fairly reflect present needs and conditions.”

None of the evidence we have received leads us to believe that this is less true now than it was at the time the Committee on General Practice drew up its report.

Assistants and trainee assistants

38. Information given to the Committee by the Health Departments showed that the numbers of assistants employed in general practice in Great Britain year by year from 1953 were:—

TABLE 5

Number of Assistants and Trainee Assistants, January, 1953 to January, 1956

				<i>Assistants</i>	<i>Trainee Assistants</i>	<i>Total</i>
January, 1953	...	...	...	2,100	430	2,530
January, 1954	...	...	...	1,901	374	2,275
January, 1955	...	...	...	1,823	411	2,234
January, 1956	...	...	...	1,838	427	2,265

It will be seen that since 1954 the total number of assistants has remained fairly steady although over the same period the number of principals has been rising. We considered whether we ought to allow for an increase in the future numbers of assistants to match the increase we foresee in the number of principals, but came to the conclusion that we would not be justified in doing so. We have, therefore, assumed that the number of assistants will continue at its present level.

Private general practice

39. Many general practitioners whose main employment is within the National Health Service also have some private patients. In addition, the British Medical Association have told us that there are about 650 general practitioners whose work lies solely or mainly with private patients. The future of private practice cannot be foreseen. Some people hold the view that it is contracting whilst others take the contrary view. At present private patients are not able to have their prescriptions dispensed under the National Health Service and have to pay the whole cost themselves, and we were told that if this situation were altered the number of private patients would increase. But whether private general practice increases or decreases the total number of persons in Great Britain for whom general medical services—either through the National Health Service or privately—have to be provided is not affected. Even if, as was stated to us in evidence, a private patient takes up rather more of his doctor’s time than does a National Health Service patient it seemed to us that the total number of general practitioners would not be affected to any significant extent. Accordingly, in making our estimates we have not made any allowance for any change there may be in the amount of private general practice.

40. We are aware that, in several fields of employment for which elsewhere in this report we have estimated the likely expansion in terms of whole-time doctors, the expansion may, in fact, be achieved only partly by way of an increase in the number of whole-time doctors, the rest coming from an increase in the part-time services given by general practitioners. If general practitioners take on outside work in this way to an extent greater on average than at present, more of them will be required. The number of additional general practitioners required would, of course, be the number by which our total estimate for the outside fields of employment exceeds the actual number of whole-time doctors entering these fields. This would point to a possible increase in the total number of general practitioners even greater than that for which we have provided. Indeed, the Medical Practices Committees have told us that when considering the adequacy of the number of general practitioners in a particular area they take into account their other commitments outside general practice, and it follows from this that the number of doctors who would be admitted to an area before it was classified as "Restricted" (and therefore closed to additional doctors) would rise as the outside commitments of the general practitioners there rose. While this is true, the estimates we are making relate to the size of the medical profession as a whole and it is not necessary for us to concern ourselves whether a particular piece of new work will be done by say one full-time hospital doctor or by several general practitioners giving part-time services to an extent which necessitates the appointment of an additional general practitioner. It is sufficient for our purpose to know that one extra doctor will be required and full allowance has in fact been made, in the sections of our Report which follow, for the extra doctors needed in the hospital and other services.

Summary

41. Before we pass to other branches of medical practice, it may be convenient to summarise the expansion we foresee in general practice. To secure an improvement in distribution there should be an increase of about 625 principals over the number in July, 1955 (paragraph 34). In addition 75 extra general practitioners will be needed each year to offset changes in the size and age distribution of the population (paragraph 35).

Hospital Medical Staff

Specialist staff ; junior staff

42. In making our estimates for the hospital service we found it convenient to deal separately with "specialists" on the one hand and "junior" staff on the other. The grades of staff which we placed in these categories are:—

Specialists—Consultants and Senior Hospital Medical Officers

Junior Staff—Senior Registrars and Registrars

Junior Hospital Medical Officers

Senior House Officers

House Officers (including medical graduates working the compulsory pre-registration year in hospitals).

Specialists

43. Figures given to us by the Health Departments showing the increases in the specialist staff in hospitals in Great Britain since 1949 are set out in the following table.

TABLE 6
Numbers of Consultants and Senior Hospital Medical Officers: 1949 to 1955

Year ending	England and Wales			Scotland			Great Britain		
	Con- sultants	SHMO	Total	Con- sultants	SHMO	Total	Con- sultants	SHMO	Total
Dec. 1949 ...	4,959	1,860	6,819	633	249	882	5,592	2,109	7,701
Dec. 1950 ...	5,418	1,940	7,358	688	271	959	6,106	1,211	8,317
increase ...	459	80	539	55	22	77	514	102	616
Dec. 1951 ...	5,649	2,130	7,779	707	290	997	6,356	2,420	8,776
increase ...	231	190	421	19	19	38	250	209	459
Dec. 1952 ...	6,028	2,200	8,228	724	292	1,016	6,752	2,492	9,244
increase ...	379	70	449	17	2	19	396	72	468
Dec. 1953 ...	6,165	2,245	8,410	780	283	1,063	6,945	2,528	9,473
increase ...	137	45	182	56	-9	47	193	36	229
Dec. 1954 ...	6,269	2,282	8,551	804	304	1,108	7,073	2,586	9,659
increase ...	104	37	141	24	21	45	128	58	186
Dec. 1955 ...	6,400	2,318	8,718	844	319	1,163	7,244	2,637	9,881
increase ...	131	36	167	40	15	55	171	51	222

44. The table shows that the rate of expansion brought about by the advent of the National Health Service in July, 1948, had declined appreciably by 1953. Though the expansion in 1955 was higher than that in 1954 this was found to be mainly attributable to a specially large increase in the number of consultants in England and Wales in the first six months of 1955. It was suggested to us in evidence that the reason for the slowing down in the rate of expansion is that many of the more urgent needs have now been met and that the spreading of hospital and specialist services beyond the large cities and throughout the country is now well advanced. This is in accordance with our own assessment of the present stage of development of the hospital and specialist services. In this connection we observed from the Annual Report of the Ministry of Health for the year ending December, 1955, that the hospital waiting lists at the end of the year showed a reduction of 4.5 per cent on the previous year. We have had no evidence, however, which leads us to think that expansion of the hospital and specialist services is at an end. The population is continuing to increase and the proportion of older people is increasing. Also, we have had evidence suggesting that increases in the numbers of specialists are likely to continue to be required as medical knowledge and practice develop and become more elaborate, exhaustive and time-consuming. The number of new out-patients seen at consultative clinics in England and Wales and the total number of attendances continue to increase. Moreover, it is a fact that the amount of new hospital building is increasing. These considerations have led us to conclude that a reasonable forecast for the period ending June, 1965, would be that specialist staff will continue to expand at a rate only a little below that recently experienced. An average annual expansion of 160 over that period would, we think, be about right.

It is difficult to see further ahead, but we think that by about 1965 expansion of the specialist services will have slowed down and that for the period 1965 to 1971 the average annual increase of specialist staff might be halved. These estimates of future growth are, of course, very speculative but are broadly supported by the evidence we have received, including that of the British Medical Association whose forecast, if spread over the next twenty years, was equivalent to an average annual expansion very near to our own estimate of 160.

45. The British Medical Association told us that they had built up their forecast from an examination of the requirements of the individual specialties and we considered whether we ourselves should include in our report a separate estimate for each specialty. We concluded, however, that this was not necessary for our purposes.

46. Information given to the Committee by the Health Departments showed that of every 100 of the existing specialists about 40 were whole-time and about 60 part-time giving services approximately estimated to be equivalent to 40 whole-time staff. In addition to their hospital duties, the part-time staff undertake a good deal of outside work such as teaching, research, specialist services for local authorities, medical boards for government departments and private practice. We are aware that hospital authorities sometimes combine into one post two or more posts with only a few sessions each as such posts fall vacant on the retirement of their holders. But no evidence was received which led us to believe that there was likely to be in the future any very significant change either in the relative proportions of whole-time specialists or in the proportions of their time which part-time specialists give to the hospitals on the one hand and to their non-hospital work on the other. It follows, therefore, that the estimate of an average annual increase in the number of specialists of 160 per annum (reducing to 80 after mid-1965) contains within itself provision for increased work outside the hospitals by the part-time staff. This is a point to which we return in paragraphs 56 to 59.

Junior hospital staff

47. Between December, 1952, and December, 1955, the number of hospital medical staff in Great Britain below the rank of specialist (excluding general practitioners giving part-time services in hospitals) rose from about 9,000 to 9,900.

48. From the results of enquiries made of hospital authorities, the Ministry of Health informed us that there were in the middle of 1955 about 700 unfilled junior hospital posts in England and Wales. For Scottish hospitals the Department of Health for Scotland estimated that their shortage of junior staff was about 70. We think that, as time passes and the number of doctors available for all the competing demands is increased, these deficiencies will be made good. We have made an appropriate allowance for the extent to which part-time hospital services will be given by the additional doctors we envisage in general practice if, as seems probable, these doctors undertake part-time hospital services to the same extent as existing general practitioners.

49. We considered whether, in addition to making an allowance in our estimates for the extra doctors required to meet the deficiencies existing at mid-1955, we should also allow for the further expansion of junior hospital staff year by year. It is clear that an appropriate balance will have to be kept between specialist staff and junior staff. With this in mind we think it is likely that, to meet both their existing and future requirements, hospitals will increase their junior staff by about the same amount as their specialist staff, i.e. 160 a year (reducing to 80 after mid-1965). We foresee that these

increases in hospital junior staff will be achieved partly by some of the younger doctors staying longer in the hospital service and partly by an increase in the extent to which general practitioners undertake part-time work in hospitals.

Miscellaneous hospital and specialist medical staffs

50. In addition to the principal groups of hospital and specialist staff discussed in the foregoing paragraphs, there are about 250 doctors engaged whole-time as administrative medical superintendents and on the staffs of Regional Hospital Boards, the Blood Transfusion Service and the Mass Miniature Radiography Units. We foresee no significant change in this number during the period covered by our review.

Private practice of specialists

51. Many hospital specialists also have private patients. In addition, there are a few specialists engaged solely in private practice. The future of private work cannot be foreseen. Some people assert that it is decreasing as hospital out-patient facilities improve and attract more and more of those who had hitherto had private consultations. Others hold the contrary view, saying that the development of private health insurance schemes is expanding the demand for the services of the private specialist both in his consulting room and in the private nursing home. As we have already said, however, in the section dealing with private general practice, we do not think that changes in the numbers of private patients can have any significant effect on the total number of doctors required in the National Health Service and private practice taken together. We have, therefore, not allowed for any change there may be in the amount of private specialist practice in our estimate of the future number of specialists.

Summary

52. We foresee an annual increase of about 160 specialists until June, 1965, and of about 80 thereafter; and similar increases in junior staff to make good existing deficiencies and to provide for expansion.

Local Authority Medical Staff

(including the School Health Services)

53. The total number of doctors whose predominant employment lies with local authorities is about 2,500. The evidence which we have received suggests to us that local authorities have not been able to secure all the whole-time staff they desire and that, in consequence, there is a deficiency which we estimate to be about 125 whole-time doctors. In addition to their whole-time staff, local authorities employ also part-time doctors; some of these are specialists, to whose services for local authorities reference has already been made in paragraph 46, and others are doctors mainly engaged in general practice but also employed by local authorities either on work for which the authorities do not need whole-time staff or to offset the vacancies for whole-time staff just mentioned. There is no deficiency of part-time staff.

54. On the future of local authority medical services, the evidence submitted by the authorities' Associations can be conveniently summed up in the words of the Association of Municipal Corporations who said "... local authorities do not at present anticipate developing their health services in a manner which will call for an increased number of medical officers". In their evidence the British Medical Association said that the total number

of local authority medical officers was unlikely to be materially altered unless there were a complete re-organisation of the public health services, and went on to suggest that the total requirement for whole-time medical officers would be met by an increase of 75. On the other hand, the Society of Medical Officers of Health in their evidence referred to the past successes of the public health service in controlling infectious diseases and in dealing with gross environmental hazards to health and expressed the view that there are still many worlds for it to conquer and much preventive work to be done in new fields.

55. We recognise the great value of the work which the public health services have done in the past and the importance of the work being done today, but we are not convinced that any significant expansion of the public health services is likely in the foreseeable future. We considered whether any expansion was likely to arise from the changes forecast in the size and age distribution of the population. We concluded, however, that on balance they would not be likely to lead to any significant growth in the work of doctors engaged in the public health services, particularly when account has been taken of the fact that the inception of the National Health Service, with its provision of general medical services available without charge to the whole population, has brought about an increase in the part played by the general practitioner in preventive medicine and health education in the home. It is our view, therefore, that the effect, if any, of population changes on the numbers of doctors employed by local authorities (including those employed in the School Health Service) will be small. We think, however, that the 125 existing vacancies for whole-time doctors in the local authorities' service will be filled in due course and have included them in our estimates; but in doing so we have made an appropriate allowance for the extent to which these vacancies are already partly offset by the part-time services of general practitioners and will be further offset in future if, as seems probable, the additional doctors we envisage in general practice undertake local authority work to the same extent as the doctors already in general practice.

Doctors Employed at Universities and by the Medical Research Council on Teaching, Research and Post-graduate Study

Universities

56. Information obtained from the University Grants Committee showed that the numbers of whole-time staff employed in the medical faculties of the universities in Great Britain in the academic year 1954-55 were:—

Professors	...	...	...	...	...	266
Assistant Professors and Readers	...	...	...	...	...	163
Senior Lecturers	...	...	...	...	...	306
Lecturers	...	...	...	...	...	606
Assistant Lecturers and Demonstrators	...	...	...	...	...	260
						<hr/> 1,601 <hr/>

All, except a few of those teaching pre-clinical subjects, were medically qualified. In addition, there were part-time teaching staff. The University Grants Committee had no statistics for these but most of them are employed in hospitals and are therefore included in the figures in paragraphs 43 and 47 dealing with hospital medical staff.

57. On the question of the future expansion of the numbers of doctors employed in this field, we consulted the Committee of Vice-Chancellors and Principals. They told us that it was impossible to forecast with any accuracy

the numbers of whole-time doctors to be employed in the future, pointing out that these numbers will be influenced by

- (a) the growth of medical knowledge and the sub-division of subjects,
- (b) developments in teaching techniques,
- (c) possible changes in the proportions of whole-time university clinical staff and hospital staff engaged in teaching and in the care of patients in teaching hospitals, and
- (d) the growth of medical research and possible changes in the division of responsibility for this research between the universities and other bodies (e.g. the Medical Research Council).

These developments were unpredictable as was also the amount of money from time to time available to universities for teaching staff salaries. The best forecast which the Committee of Vice-Chancellors and Principals could offer was, therefore, no more than a rough guess based on its knowledge of the present development of the medical schools, some of which are less adequately staffed than others, and on its impression of the trend that future development will follow. The Committee suggested to us that for our purposes we should allow for an annual increase of 1 per cent in the number of doctors employed whole-time by universities on teaching or research. We have accepted this suggestion though we recognise its speculative nature.

58. As has already been mentioned, most of the part-time teaching staff in medical schools are also employed in hospitals and are, for this reason, included in the figures for hospital staff given in paragraphs 43 and 47. In addition, we understood it is estimated that 400 of the whole-time teaching staff have honorary contracts with the hospital authorities and are, for this reason, also included in the hospital staff figures. For all grades of hospital staff, including those employed also by universities, we have forecast an increase of 320 per annum up to mid-1965 and 160 per annum thereafter. Expressed as percentages, these increases are approximately 2 per cent and 1 per cent respectively and we think that they contain adequate provision for the expansion of teaching and research. There remain, however, the 1,200 whole-time university medical teaching and research staff who we understand have no contracts with hospital authorities and are therefore not covered by the increases in the preceding paragraph. To provide for the 1 per cent increase suggested by the Committee of Vice-Chancellors and Principals we have allowed for growth in this group at the rate of 12 doctors per annum.

Medical Research Council

59. The Medical Research Council told us that they did not expect any significant increase in their own whole-time medical staff of 298 (including the Public Health Laboratory Service). We accept this view and have made no allowance for any increase in the Council's staff. In addition to the research work undertaken by the Council's own staff and by 20-30 doctors with research grants from the Council, a great deal of the medical research in this country is carried out by the staffs of universities and hospitals. Provision for the expansion of these staffs and, hence, of the amount of research work they can undertake, is discussed in paragraphs 46, 49 and 58.

Postgraduate study and research

60. A recent enquiry made of the Deans of medical schools in Great Britain and the British Postgraduate Medical Federation showed that the number of doctors trained in Great Britain, excluding those from Northern Ireland, Eire and overseas, who are engaged on postgraduate study or research and undertake no other medical work was, at the time of the enquiry, about 700. We have no reason for supposing that this number will change either way to a significant extent.

Doctors Engaged in Factory and Industrial Medical Services

61. The evidence we have received covers the medical services not only in factories, but also in other industrial undertakings including ordnance factories, mines, quarries, docks and transport undertakings. The medical services provided in factories form by far the larger part of this group.

Factory medical services

62. Apart from the small medical staff in the factory inspectorate of the Ministry of Labour and National Service, the doctors engaged in the factory medical services fall into two main groups—the Appointed Factory Doctors (formerly known as Certifying Factory Surgeons) and other medical officers employed in industry, conveniently referred to as “industrial medical officers”. Appointed Factory Doctors are appointed by the Chief Inspector of Factories and carry out statutory duties under the Factories Acts and regulations made thereunder, e.g. the medical examination of workers under 18 in Factories Acts premises on entry to employment and annually thereafter until aged 18, and the medical examination of some workers employed in certain processes with special health risks. Industrial medical officers are doctors employed voluntarily by factory managements to supervise and protect the health of their workers; some are also Appointed Factory Doctors. Many of the Appointed Factory Doctors and industrial medical officers work only part-time on their factory duties, being otherwise engaged in ordinary general practice. The amount of time given to these factory services (statutory and voluntary) by the individual general practitioners working part-time varies a good deal, but the average is not thought to be high; the Report of a Committee of Enquiry on Industrial Health Services (usually referred to as the Dale Committee) (Cmd. 8170) shewed that in 1949 only about 30 per cent gave more than three hours per week and we have received no evidence to lead us to suppose that the situation has since changed significantly. It has not been possible to obtain much statistical information about factory medical services but the Ministry of Labour and National Service have given some information which has enabled us to make the rough comparison between 1949 and 1955 set out below:—

TABLE 7
Factory Medical Services: 1949 compared with 1955

	1949	1955	Increase
Number of factories (with 50 or more workers) with medical services	3,200	4,610	1,410
Appointed Factory Doctors and industrial medical officers—			
whole-time	240	465	225
part-time	2,840	4,000	1,160
Estimated amount of services given by the above part-time doctors expressed in terms of whole-time doctors	310	440	130
Total amount of service given expressed in terms of whole-time doctors	550	905	355

The foregoing figures suggest that during the six years 1949 to 1955 the amount of medical services (voluntary and statutory) in factories increased by about 60 per cent at an average rate equivalent to about 60 additional whole-time doctors per annum. Of this annual increase nearly 40 were actually whole-time doctors.

63. In this field where about half the medical services are provided voluntarily by factory managements as part of the health and welfare arrangements for their staff, it is impossible to make any firm estimate for the future. Nevertheless, after considering the evidence submitted to us we have thought

it right to assume that factory medical services will continue to expand and to make increasing demands on medical manpower and we have speculatively estimated the rate of expansion as equivalent to 40 whole-time doctors per annum for five years and 20 per annum thereafter. We also think it likely that the additional doctors we expect to enter general practice will undertake industrial medical work to about the same extent as do the doctors already in general practice; this contribution to industrial medical services will be additional to the expansion just mentioned. We are aware that in 1955 the Minister of Labour and National Service appointed a Standing Advisory Committee on Industrial Health Services and it may be that in due course that Committee will assemble information which will either confirm our estimate above or provide the basis for a firmer estimate.

Mines and quarries

64. The Ministry of Power have told us that, as well as 5 full-time doctors in H.M. Inspectorate of Mines and Quarries, nearly 70 whole-time doctors are employed by the National Coal Board who expect that this number will increase by about 20 by 1960. In addition, some general practitioners give part-time services in mines and quarries, but this forms a relatively small part of their work.

Ordnance factories

65. The Ministry of Supply have told us that in ordnance factories there are 8 whole-time doctors employed on research and that, in addition, nearly 80 general practitioners give part-time services ranging from one to ten hours per week. The Ministry foresee no substantial change.

Gas industry

66. The Ministry of Power have told us that in the gas industry there are 23 doctors giving whole-time services and about 30 giving varying amounts of part-time services, most of whom are in general practice. No substantial change is expected in these numbers.

Road and rail transport

67. The Ministry of Transport and Civil Aviation have told us that there are no medical services in the road transport industry apart from the road services of the British Transport Commission which uses the medical services of British Railways (including those of the London Transport Executive) and also calls on the services of general practitioners for occasional needs. The British Railways employ 44 medical officers in their regions, whilst the London Transport Executive employ 10 for both their road and rail services. The Ministry say that it is unlikely there will be any substantial change in these numbers.

Merchant Navy

68. Under the Merchant Shipping Act, 1894, all foreign going vessels with 100 or more persons on board are required to carry a doctor. At present there are about 210 doctors so employed and the Ministry of Transport and Civil Aviation do not expect this number to vary more than 10 per cent either way in the foreseeable future. We are aware that a number of smaller vessels carry doctors, most of whom are post-graduate medical students "working their passage" for one journey, but we do not think any account need be taken of this for our purposes.

Civil Aviation

69. Apart from 6 doctors employed by the local health authority on public health and immigration control duties at London Airport, about 12 doctors are employed by the British Airways Corporations. The Ministry of Transport and Civil Aviation do not foresee any substantial change here.

Docks

70. Five doctors (including one part-time) are employed by the National Dock Labour Board. The Port of London Authority employs one doctor and the Mersey Docks and Harbour Board one part-time doctor. Elsewhere the services of outside doctors are obtained as need arises. No change is expected here.

Summary

71. On the basis of the foregoing it seems to us that it would be reasonable to assess the future expansion in the medical services in factories, mining and quarrying and transport as the equivalent of about 45 whole-time doctors per annum until 1960 and 20 per annum thereafter and we have made appropriate allowance for this in our estimates.

Pharmaceutical Industry

72. The Association of the British Pharmaceutical Industry, which covers firms engaged in the manufacture of drugs, told us that the industry employs 146 doctors (including 52 part-time staff giving, on average, about one-quarter of their working time). The Association expect the number of doctors to increase by about 50 (including 10 part-time staff) in five years and we have made allowance for this in our estimates.

Medical Staff Employed by Government Departments

73. Statistics given to us by H.M. Treasury showed that, on the assumption that each of the part-time officers employed gave, on average, services equivalent to half-time, the total number of doctors employed in government departments in Great Britain (including the Prison and Borstal Services) amounted to the equivalent of approximately 570 doctors. We received statements of evidence from a number of government departments who between them employed about 80 per cent of these doctors and from this evidence it appeared that in the medical staffs of all government departments there were about 30 unfilled vacancies at mid-1955. We have made an appropriate allowance for these vacancies in our estimates. None of the departments expected any significant change in their medical establishments in the future and we have not, therefore, allowed for any expansion apart from the filling of existing vacancies. In addition, the evidence indicated that there were a small number of vacancies—about 10—in the State Institutions (Broadmoor, Rampton and Moss Side) and in the War Pensioner and Polish Hospitals and an allowance for these also has been made. As well as whole-time doctors the Prison and Borstal Services and the State Institutions in Scotland employ part-time general practitioners and specialists but on an insignificant scale relative to the total numbers of general practitioners and specialists and we have not thought it necessary to take any account of the possibility of increase here having regard to the relatively large expansion of general practitioners and specialists which has been envisaged elsewhere in our Report.

74. We are aware that some government departments make use of the part-time services of specialists and general practitioners on medical boards. For example, the Regional Medical Services of the Health Departments, which

provide a medical reference service for the medical examination of persons on behalf of certain government departments, supplement the work of their own full-time staff with the part-time services of general practitioners. The Ministry of Labour and National Service hold medical examinations in connection with National Service in the armed forces; these will however cease in 1960. The Ministry of Pensions and National Insurance have to provide for medical examination of war pensioners and persons claiming industrial injuries disablement benefit. The Ministry of Pensions told us that the work in connection with war pensioners was expected to decline but the work on industrial injuries was increasing and was likely to continue to do so, and in consequence their total demand on medical manpower was expected to remain at about its present level. The volume of this medical board work is not large in relation to the number of doctors over which it is spread and we have had no evidence to suggest that, apart from the cessation by 1960 of medical examinations for National Service, it was likely to change very much. It is improbable that any likely increase in these part-time services could not be absorbed without difficulty within the expansion which we have estimated elsewhere in general practice and the hospital and specialist services.

Summary of deficiencies and of the numbers of additional doctors required annually in civilian practice

75. Before we pass to the medical services of the Armed Forces it may be convenient here to bring together the separate requirements for additional doctors in the several fields of civilian medical practice discussed in the preceding paragraphs of this section of our report. These requirements comprise the additional doctors needed

- (a) to satisfy deficiencies existing in 1955 and to provide the additional general practitioners required to improve distribution (paragraphs 34, 55 and 73), and
- (b) to meet the further expansion in civilian medical practice in Great Britain we have envisaged for the future (paragraphs 35, 44, 49, 58, 71 and 72).

When the requirements in these two groups are added together and an appropriate allowance is made for the wastage from death and premature retirement which will occur amongst these doctors during the period covered by our estimates the total additional requirements are:—

(a) Total number of additional doctors needed to meet deficiencies existing in 1955							780
(b) Annual number of additional doctors needed to meet further likely expansion—							
1955-60	...	...	...	...	...	...	465 per annum
1960-65	...	...	...	...	...	...	440 " "
1965-70	...	...	...	...	...	...	280 " "
1970-71	...	...	...	...	...	...	280 " "

These are the two main sets of figures which we use in subsequent paragraphs (paragraphs 105-111) when we come to estimate the likely future increases in the total numbers of medical practitioners. It will be appreciated that their starting point has necessarily had to be a date—June, 1955—which is now past.

IV. MEDICAL SERVICES OF THE ARMED FORCES

General

76. In this field, which is not covered by the count of civilian doctors in Appendix 2, we have had to rely on estimates made by the three Service Departments. The estimates first given to us were recently amended in the light of the Government's recent review of national defence policy (White Paper on Defence: Cmd. 124, dated 4th April, 1957) and now take account of the planned reduction in the size of the Armed Forces and the abolition of National Service by the end of 1962. We understand that the estimates are somewhat speculative as they rest on assumptions about the peacetime size and disposition of the forces which may change from time to time.

Naval Medical Service

77. This service provides medical care not only for naval personnel but also for the families of naval personnel abroad as well as Admiralty civilians and their families abroad. In their evidence the Admiralty told us that their future requirements under the revised defence policy were uncertain but it was provisionally estimated that the number of medical officers required would be reduced to a total of 400 by the end of 1962 and then remain at that figure. The planned composition of these requirements and the number on strength in June, 1955, were:—

	<i>Future requirements</i>	<i>Strength June, 1955</i>
Permanent officers	270	251
Short service officers	130	101
National Service officers	Nil	102
	<hr/> 400	<hr/> 454

The Admiralty estimated that about 12 doctors would be required annually to fill vacancies arising from death and retirement amongst the 270 permanent officers.

Army Medical Service

78. In their evidence the War Office estimated that, so far as could be foreseen, the requirements of the Army medical services would be reduced to about 800 doctors by the end of 1962. The planned composition of these requirements and the numbers on strength in May, 1955, were:—

	<i>Future requirements</i>	<i>Strength May, 1955</i>
Permanent—		
Regular officers on Active List	600	434
Re-employed retired regular officers	100	35
Short service officers	100	} 1,116
National Service officers	Nil	
	<hr/> 800	<hr/> 1,585

Permanent officers normally retire from the Active List between the ages of 53 and 60 years, according to rank, but the War Office's medical staffing policy provides for retiring officers to be re-employed until age 65 years.

The above figures show that, under the War Office plan, the total number of medical officers at 1962 will be 785 below the number on strength in May, 1955. The War Office estimated that 25–30 doctors would be required annually to fill vacancies arising from death and retirement amongst the 600 permanent officers on the Active List.

Royal Air Force Medical Service

79. In their evidence the Air Ministry said that the number of doctors required by the Royal Air Force depended not only on the size of the force but also on the functions and distribution of its units and on the extent of the medical services provided for families of R.A.F. personnel. The Department told us that, so far as could be foreseen, the number of medical officers required would be reduced to about 600 by the end of 1962. The planned composition of these requirements and the numbers on strength in May, 1955, were :—

	<i>Future requirements</i>	<i>Strength May, 1955</i>
Permanent officers	450	277
Short service officers	150	} 519
National Service officers	Nil	
Full-time civilian doctors	As required to make good any deficiency of permanent or short service officers	26
	<hr/> 600	<hr/> 822

In addition to the 26 full-time civilian doctors, about 200 civilian doctors, most of whom are otherwise engaged in general practice, are employed on a part-time basis to serve stations where no R.A.F. medical officer is employed or on a casual basis to cover the off-duty periods and leave of R.A.F. medical officers at stations where only one medical officer is employed.

The above figures show that, under the Air Ministry's provisional estimate, the total number of medical officers at 1962 will be 222 below the number on strength in May, 1955. The Department estimated that 17 doctors will be required annually to fill vacancies arising amongst the 450 permanent officers.

Needs of all three Services taken together

80. For the purposes of our task it is convenient to bring together the needs of all three services. The evidence of the three Service Departments showed that they aimed at increasing the number of permanent officers (including the re-employed retired permanent officers) from about 1,020 to about 1,420 and they estimated that when this had been done an annual intake of about 55 would be required to fill vacancies arising from deaths and retirements amongst these permanent officers. At the same time the number of short service and National Service officers was to be reduced from about 1,840 to about 380. These changes would reduce the number of doctors employed by the Armed Forces from 2,860 to 1,800 and in our estimates of the number available for civilian employment we have taken account of this 060 reduction. This impending reduction is much greater than that we had earlier expected from the first estimates given by the Service Departments and has had an appreciable effect on the conclusion we have reached as to the date from which a reduced output from medical schools will suffice to meet requirements.

81. It may be that the Service Departments will not succeed in securing the desired expansion of their permanent cadres of medical officers and will have to continue to employ rather more short service officers than is planned. We have considered this possibility, but concluded that it would have no appreciable effect on the total number of doctors required for both civilian and forces medical services taken together. We, therefore, found no need to take account of this possibility when formulating our estimates.

V. OVERSEAS EMPLOYMENT OF DOCTORS FROM GREAT BRITAIN; DOCTORS FROM NORTHERN IRELAND AND FROM OVERSEAS SETTLING IN GREAT BRITAIN

General

82. Not all doctors trained in Great Britain remain here to practise and each year a number take up permanent employment overseas, mainly in the self-governing Commonwealth countries and the Colonies. Conversely, not all doctors practising in Great Britain were trained here. Some received all or most of their training elsewhere. Clearly, therefore, any estimates of the required output of doctors from medical schools in Great Britain and of the consequential intake of students must take account both of the doctors who are likely, though trained in this country, to make their careers overseas and of those who have been trained overseas but settle and practise here. The information available about the numbers in these two categories is scanty but in the paragraphs which follow we have given the best estimates we can make, first, of the present annual number in each category and, second, of the future trend of these movements whose combined effect is a net "export" of doctors from Great Britain.

Employment Overseas

83. There is no doubt that the opportunities for doctors from Great Britain to obtain employment overseas have been diminishing in the recent past and will continue to do so in future.⁽¹⁾ This has been brought about by two main factors: the grant of self-government to India, Pakistan, Burma and Ceylon and a desire in those countries that their doctors shall be drawn from their own people; and the development of medical training facilities not only in the self-governing Commonwealth countries but also in some of the Colonies. In the foreseeable future additional territories will become self-governing and the trend towards self-sufficiency in medical manpower will probably continue.

Self-governing Commonwealth countries

84. In the evidence given by the Commonwealth Relations Office the opinion was expressed that the opportunities for employment in the self-governing Commonwealth countries have been declining and will shrink still further in the future. We decided, therefore, that in our estimates we should budget for emigration at a lower rate than has been experienced up to the present. At our request the Commonwealth Relations Office obtained information from their High Commissioners about the numbers of doctors emigrating in recent years from Great Britain to Canada, Australia, New Zealand, the Union of South Africa, India, Pakistan, Ceylon and the Federation of Rhodesia and Nyasaland, and about likely future trends. This information was not such that any precise numerical conclusions could be drawn from it and any estimate we make for the future must, therefore, be speculative. However, even if it is not exact there is no reason for supposing that it is not of roughly the correct magnitude. The information obtained by the High Commissioners suggested that the annual number of British doctors leaving Great Britain and settling in the self-governing countries in recent years was about 200.

⁽¹⁾ This is discussed in an article by Sir Stanley Davidson in the *British Medical Journal*, 14th May, 1955.

Colonial territories

85. In recent years the numbers of doctors of British origin recruited for the colonial medical departments have been as follows:—

1950	...	...	...	...	...	131
1951	...	...	...	...	...	169
1952	...	...	...	...	...	147
1953	...	...	...	...	...	127
1954	...	...	...	...	...	128
1955	...	...	...	...	...	144

Although this recruitment is about three times what it was before the War it has failed to keep pace with demands and there is a shortage of about 150.

86. The number of doctors from Great Britain required in the future in the Colonies depends upon the extent to which the colonial demand for doctors expands and is not met by the output from the colonial medical schools at Ibadan (Western Nigeria), Makerere (Uganda), Hong Kong, Singapore and Jamaica and the students from the Colonial territories who take their medical training in Great Britain and elsewhere and then return to work in their own countries. The Colonial Office told us that the estimated annual output of doctors from the existing colonial medical schools is about 200 and that this number may rise to 300–350 in about twenty years' time. It is not, however, expected that this output of doctors, even when combined with the colonial-born students sent to Great Britain and elsewhere for training, will meet total needs except in the Far Eastern, South East Asian, West Indian and Mediterranean territories. In spite of a steady increase in the number of doctors of local origin trained locally or elsewhere the territories other than those just mentioned will continue to need doctors from Great Britain for many years to come. We were told that it is impossible to do more than make a very approximate assessment of what these needs are likely to be but that, for doctors brought up and trained in Great Britain (excluding those who come to Great Britain specifically for their medical training) who emigrate to practise in colonial territories, we might reasonably allow an annual figure of 150 declining gradually to about 50 by 1975. We have accepted this suggestion and made an appropriate allowance in our estimates.

87. There is another matter which, though outside our terms of reference, was so clearly considered by the Colonial Office to be of great importance that we decided we should make some reference to it in our Report. They told us of the numbers of students of colonial origin now training in Great Britain and the importance of maintaining and strengthening the link with British medicine. This medical link is not, however, as strong as it could be as a significant number of students from British colonies are being sent to medical schools in foreign countries. The Colonial Office said that at present about 100 colonial undergraduate students are placed each year in medical schools in the British Isles but that if more places could be made available this figure could be considerably increased. They thought that if 75 additional undergraduate places in British medical schools could be made available annually for colonial students there would be no difficulty in producing that number of young men and women of the right educational standard to fill them.

88. The estimates of the required intake of students into British medical schools which we have made in paragraph 113 do not include these 175 places per year for colonial students.

Medical missions

89. We consulted the Conference of Missionary Societies in Great Britain and Ireland and the Medical Missionary Society. We found that no central statistics are kept but the Conference was good enough to obtain and summarise figures from more than sixty constituent societies. On the basis of these figures the Conference told us that the aim was to increase the number of medical missionaries from 250 at present to 370 in ten years' time; that the average annual number of doctors needed to offset losses from death and retirement during the next ten years was 25; and that almost all the doctors employed in these missions were from Great Britain. The Medical Missionary Society agreed with the Conference's assessment of future needs and we have accepted it for our purposes and have made appropriate annual provision in our estimates. No suggestion was made about average annual replacement needs after ten years and we had to make our own assumptions. We understand that the annual replacement rate of 25 suggested for the next ten years is high because the War upset normal recruitment and, hence, the age distribution of the doctors. From mid-1965 onwards we have assumed the rather lower replacement rate of 15.

Short-term appointments overseas; re-employment in Great Britain of doctors retired from Armed Forces and Colonial Medical Service

90. We are aware that some of the doctors from Great Britain who take up colonial appointments do so for a few years only and then return to this country and enter practice here. But on their return to Great Britain those doctors have to be replaced in the Colonial territories and so the total number of doctors from this country in those territories at any one time remains more or less the same. It therefore does not seem to us that this turnover of doctors in short-term posts requires any special allowance in our estimates and none has been made. Doctors retiring from long-term employment in the colonial and mission services (and in some instances, from the Armed Forces) do so at an age rather lower than the normal retiring age for home civilian practitioners and some take up civilian practice in Great Britain and so are a gain to the available medical manpower. There is, however, always a standing loss from the medical manpower in this country because of the temporary absence of doctors on short-term overseas appointments, e.g. with oil and shipping companies and with medical schools. This gain and loss are both very small relative to the size of the medical profession and it seems to us that it would not be unreasonable to assume that the one is roughly offset by the other and that no special account need be taken of either.

Doctors from Northern Ireland and from Overseas

General

91. Figures published in the Report of the Interdepartmental Committee on Medical Schools⁽¹⁾ (usually referred to as the Goodenough Committee) showed that in 1943 about 12 per cent of the doctors then practising in Great Britain had received all or most of their training elsewhere. To ascertain the situation at more recent dates we took random samples of between 4,000 and 5,000 doctors listed in the Medical Directories for 1953 and 1955, excluding any doctors who were shown as retired or who had qualified forty-five or more years earlier, and analysed these samples by place of residence and

⁽¹⁾ A committee appointed in 1942 with terms of reference—"Having regard to the statement made by the Minister of Health in the House of Commons on 9th October, 1941, indicating the Government's post-war hospital policy, to enquire into the organisation of Medical Schools, particularly in regard to facilities for clinical teaching and research, and to make recommendations."

country of qualification; the latter we determined by reference to the first medical qualification shown after the name. We found that in 1953 and 1955 the percentage of doctors resident in Great Britain who had qualified elsewhere was about the same as in 1943.

92. Doctors now settling in this country from elsewhere come almost exclusively from Northern Ireland, Eire and Commonwealth countries. Considerable numbers of foreign trained doctors settled in Great Britain during and immediately after the war years and obtained temporary registration in the Foreign List of the General Medical Register under the Medical Register (Temporary Registration) Orders, 1940-41, and the Polish Resettlement Act, 1947. Under the Medical Practitioners and Pharmacists Act, 1947, about one-third of these temporarily registered doctors obtained permanent registration in 1948 and the next two or three years. Thus, since about 1950 the number of foreign trained doctors admitted to the Foreign List and taking up residence here has been insignificant and it is probable that most of that small number come only for post-graduate study and experience and will in due course return to their own countries.

Doctors from Northern Ireland

93. We deal with Northern Ireland separately because of its constitutional position as part of the United Kingdom. For this reason doctors trained in Northern Ireland who settle in Great Britain cannot properly be grouped with those entering Great Britain from territories overseas; nor can doctors trained in Great Britain who settle in Northern Ireland be said to have emigrated in the normal sense of that word. Yet in framing the estimates required by our terms of reference, we must clearly take account of the movement of doctors between Northern Ireland and Great Britain.

94. At our meetings we have had the assistance of an observer from the Ministry of Health and Local Government for Northern Ireland. On our request that Department provided an estimate of the number of doctors trained in Northern Ireland who are likely to seek entry into practice in Great Britain during the next few years. Their estimate, which we accepted and which took account of the probable development of health services in Northern Ireland, losses arising from death and retirement and other relevant considerations, was that, during the next seven or eight years, the numbers entering Great Britain would probably be between 25 and 35 each year. The Ministry also explained that, while it was not possible to provide a firm estimate of the number of doctors likely to enter Northern Ireland from Great Britain, doctors of English, Scottish or Welsh origin trained in Great Britain continue to find employment in small numbers in Northern Ireland, particularly in the service of the Government of Northern Ireland, the medical school of the Queen's University of Belfast, hospitals and the public health service. Bearing this in mind, we think that the net inflow of doctors to Great Britain from Northern Ireland will be of the order of 30 per annum during the next few years.

95. The question arises whether this figure should be accepted as valid for the whole period covered by our forecast—i.e. until 1971—or be modified towards the end of the period. The nearer supply and demand in Great Britain approach the point of balance the more likely is it that doctors of Northern Irish origin may find difficulty in securing employment in Great Britain. On the other hand, a net inflow of 30 doctors per annum is not significant compared with the total output of medical schools in Great Britain. Having regard to Northern Ireland's position within the United Kingdom, its dependence on a single medical school and the small numbers involved, we have assumed that the net inflow of about 30 doctors per annum from Northern Ireland will continue throughout the full period of our forecast.

Doctors from Eire

96. When we came to estimate the numbers of doctors trained in Eire who would be settling and practising in Great Britain we were fortunate enough to secure the assistance of Mr. Atkinson Stoney, F.R.C.S.(I), President of the Medical Registration Council of Ireland, who supplied us with information about the numbers of medical graduates coming out of medical schools in Eire in recent years and about the present whereabouts of the graduates who qualified in Eire in 1948. On the basis of this information and that obtained from the analyses mentioned in paragraph 91 above, we estimate that, at the present time, the number of doctors trained in Eire who settle and practise in Great Britain is about 90 per annum.

Doctors from Commonwealth countries

97. With relatively few exceptions doctors in the Medical Register register in the country in which they qualify and it follows from this that the Commonwealth List of the Medical Register is composed, almost exclusively, of the names of doctors who qualified in the Commonwealth. We have examined the List in the Register for 1955 and ascertained the numbers and years of registration of those who were resident in Great Britain in 1955. We are aware that large numbers of doctors from the Commonwealth come here only for post-graduate study and experience after which they return to their own countries. We therefore knew that, in the case of the Commonwealth doctors who had been registered within the last five years, the figures we obtained would include a large proportion of doctors whose stay here was limited and would, therefore, be of little use in estimating the number of Commonwealth doctors settling permanently in Great Britain. This objection does not, however, apply to the figures for Commonwealth doctors who had been registered for more than five years and on the basis of these figures and the analyses referred to in paragraph 91 above, we have estimated that the number of doctors from the Commonwealth at present settling here each year is about 75.

98. In addition to the 165 doctors from Eire and the Commonwealth, there are a few, estimated at about 5 per annum, of the students from overseas who, on qualifying, remain in Great Britain instead of returning to their own countries. Thus the current annual number of doctors from Eire and the Commonwealth who settle and practise in Great Britain is estimated at 170.

Net "Export" of Doctors from Great Britain

99. Taken together, the figures in

- (a) paragraphs 84-89, which deal with British doctors who make their careers overseas and
- (b) paragraphs 96-98, which deal with doctors from overseas who settle and practise in Great Britain

shew that there is at present a net "export" of about 200 doctors per annum from Great Britain. In considering the future trend of this "export" there are two not dissimilar developments which we have to take into account. The first is that the steady rise in the number of doctors and the expansion of the medical training facilities overseas will reduce the opportunities for employment for doctors from Great Britain. The second is that the opportunities for settling and practising in this country available to doctors from overseas are also likely to diminish as time passes and the deficiencies and vacancies to which we referred earlier are met and that it therefore seems probable that fewer doctors from overseas will seek and obtain employment here. Once again exact calculation is impossible and the most that we can

do is to make what seems to us to be a reasonable adjustment of the net "export" figures. The figures we have used in making our estimates of the future output required from medical schools in Great Britain are as follows :—

<i>Net "export" per year from Great Britain</i>						
1955-60	...	...	...	...	...	160
1960-65	...	...	...	...	...	110
1965-70	...	...	...	...	...	70
1970-71	...	...	...	...	...	50

If Northern Ireland were included, these net annual "export" figures would each be reduced by 30 (paragraph 95).

VI. WASTAGE OF MEDICAL STUDENTS DURING TRAINING

Definition of Intake of Medical Students

100. Under the second part of our terms of reference we have to estimate "the consequential intake of medical students required". This we have taken to mean the number of students from Great Britain who must enter British medical schools so that, after the wastage which occurs during training, the numbers graduating are sufficient to supply the doctors required to offset deaths and retirements, to meet deficiencies and provide for expansion, to meet the needs of the Armed Forces and to cover the net "export" of doctors discussed in the preceding section of our Report. We have not included in our estimates the students from overseas who come here to qualify and then return to their own countries.

101. Losses from the ranks of medical students arise from a number of causes and occur at different stages of training though mostly in the earlier stages. Clearly intake must be defined by reference to a particular stage and we have for our purposes taken the term "intake" to mean the number of students embarking on the medical course proper i.e. beginning the second M.B. stage of training and not the number embarking on the pre-medical course (Physics, Chemistry and Biology) even when this is taken at medical schools or the university. Our reason for choosing the start of the medical course proper is that many students take their pre-medical training and examination at school; the start of the medical course proper is therefore the earliest stage of the training which all medical students take at medical schools. The collection of data about the numbers taking, and wastage during, the pre-medical course would yield results of doubtful accuracy and value.

Wastage 1945 to 1956

102. We ascertained from the Deans of Medical Schools in Great Britain the number of students embarking on the medical course proper in the years 1945 to 1950 inclusive and the number of medical graduates obtaining their first registrable degree or diploma during 1950 to 1955 inclusive in the case of graduates of schools in England and Wales, and 1950 to 1956 inclusive in that of graduates of Scottish schools. 1956 was included in the period covered by the Scottish output figures in order to make allowance for the lengthening of the Scottish period of training in 1948. We recognise that not all students who embarked on the medical course proper in or before 1950 would have qualified or ceased to train by 1955 (1956 in Scotland). A few would be still under training, for one reason or another, in 1956 (1957) or even later.

But it seems reasonable to us to assume that this small group would be effectively offset by a similar group of students who did qualify in or after 1950 but who had begun the course before 1945.

103. Because of the movement of students from one medical school to another, especially between the pre-clinical and clinical stages of the training of those students at Oxford or Cambridge, it was not possible to calculate wastage figures separately for each school; there were indications that the wastage varies a good deal between one school and another. We are, however, concerned with total intake and these variations are of little importance for our purposes. On comparing the Deans' figures for the intake of students and output of qualified doctors, we found that for Great Britain as a whole the percentage wastage during training was 4.78 for men, 8.45 for women and 5.58 for men and women together. Any appreciable change in the standards of selection, training and examination or in the proportions of the students trained at the different schools might, of course, alter the amount of wastage during training, but as we have no reason for assuming that such change will take place, we have adopted a round figure of 6 per cent as the wastage of students, men and women together, for which allowance must be made in our calculations.

Women Medical Students

104. In paragraph 9 of chapter 5 of their report, the Interdepartmental Committee on Medical Schools (the Goodenough Committee) recommended that the proportion of women students in medical schools should be about one-fifth, and this recommendation has, broadly speaking, been acted upon. The estimates of the numbers of new doctors required to offset deaths and retirements have been made on the assumption that in the future the proportion of women students will continue to accord with the recommendation of the Interdepartmental Committee.

VII. NUMBERS OF DOCTORS UP TO 1971

105. Before we present the estimates required by our terms of reference it seems desirable, for the sake of clarity, to draw attention to three points. In the first place, the starting point for the estimates must be the middle of the year 1955, that being the point of time to which our estimate of 53,260 active doctors relates. Secondly, the estimates must take account of the fact that in addition to the annual numbers required to replace wastage (paragraph 25) and the annual requirements for expansion (paragraph 75), the Armed Forces (paragraph 80) and "export" (paragraph 99), there is an initial deficiency in civilian practice which we have estimated at 780 (paragraph 75) and a planned reduction of 1,060 in the number of doctors employed by the Armed Forces (paragraph 80). Thirdly, the intake to the profession during the next few years is already determined by the number of students now in training.

106. Information was obtained from the Deans as to the estimated total annual output from all the medical schools in Great Britain over the seven years 1955-61 inclusive: 1961 was chosen as being the year by which most of the students who have so far begun the medical course proper will qualify, and therefore the year up to which output from the schools has already been determined. The figures the Deans gave us showed that (excluding students from overseas) the total output of all schools over the seven years 1955 to 1961 will average 1,825 per annum; to these must be added an estimated average annual supply of 30 doctors from Northern Ireland (paragraph 95), giving a total of 1,855.

107. In our Report we have given our main estimates of future requirements in terms of annual averages. The total average annual requirements are as follows:—

	<i>Mid-1955 to Mid-1960</i>	<i>Mid-1960 to Mid-1965</i>	<i>Mid-1965 to Mid-1970</i>	<i>Mid-1970 to Mid-1971</i>
For—				
Replacement of wastage by death and retirement ...	1,150	1,180	1,230	1,260
Expansion ...	465	440	280	280
Armed Forces ...	55	55	55	55
"Export" ...	160	110	70	50
Total ...	<u>1,830</u>	<u>1,785</u>	<u>1,635</u>	<u>1,645</u>

In giving these figures we recognise, of course, that the requirements for individual years may vary on either side of the average.

As indicated in paragraph 106, the number of new doctors to be expected from medical schools in Great Britain has already been determined up to and including 1961. During the period mid-1955 to mid-1962 inclusive, the number of doctors (including those from Northern Ireland) entering practice in Great Britain at an average of 1,855 per annum (paragraph 106) will have amounted to 12,985 and will have exceeded the requirements for the same period, calculated at 12,720 on the annual figures above, by 265. This excess will have gone some way to meet the initial deficiency of 780 (paragraph 105). The remainder of this deficiency will have been more than met by the planned reduction in the number of doctors employed by the Armed Forces, amounting to 1,060 doctors by the end of 1962, even after allowance is made for any increase in civilian medical services required to meet the increase in civilian population consequent upon the decrease in the size of the Armed Forces.

108. We stated at the beginning of our Report that we did not propose to take our detailed estimates beyond 1971. For the period 1962 to 1971 our estimate of requirements, as given in paragraph 107, is equivalent to an annual average of 1,685. On the assumption of a continued net inflow of 30 doctors annually from Northern Ireland the average annual output required from 1962 to 1971 from medical schools in Great Britain is 1,655. This requirement would be met if the current average annual output were reduced by about 170.

109. The first part of our terms of reference requires us to "estimate . . . the number of medical practitioners likely to be engaged in all branches of the profession in future. . . ."

110. Our estimates of the requirements for expansion over the period 1955–71, viz. 465 per annum during the first five years, 440 per annum during the next five years and 280 per annum thereafter, amount in all to 6,205 and we have also allowed for the making good of an initial deficiency of 780 (paragraph 75). We have estimated the number of active civilian doctors in 1955 at 53,260 (paragraph 15). On the basis of these figures, but allowing 200 for the wastage mentioned in paragraph 75, our answer to the first of the two questions posed by our terms of reference is that the number of doctors likely to be engaged in civilian practice in Great Britain in 1971 is about 60,000. The greater part of the increase is expected to occur before 1965, the number of doctors in that year being estimated at between 58,000 and 59,000. In addition, there will be 1,800 doctors employed by the Armed Forces (paragraph 80).

111. The increases in the number of doctors estimated above total about 13 per cent over the period 1955-71 inclusive, whereas the population of Great Britain is expected to increase by only about 4½ per cent over the same period. It will be seen therefore that an appreciable rise in the ratio of doctors to population is envisaged throughout the period covered by our estimates.

VIII. REQUIRED INTAKE OF MEDICAL STUDENTS

112. The second part of our terms of reference requires us to estimate the consequential intake of medical students.

113. We have already shown (paragraph 106) that up to and including 1961 the average annual supply of newly qualified doctors from medical schools in Great Britain is already determined at 1,825. In paragraph 108 we have estimated that from 1962 onwards, the requirements from those schools will be reduced to about 1,655. The average length of the training period is about five years and we have assumed (paragraph 103) a wastage allowance of 6 per cent. To supply this number of doctors, therefore, the intake to the schools from 1957 onwards, or so soon as practicable thereafter, would need to average about 1,760. To avoid any possibility of misapprehension we would like to record again that these figures of student intake (i) relate to entry to the medical course proper and (ii) do not include colonial or other overseas students who train in medical schools in Great Britain and then return to their own countries to practise.

IX. NUMBERS OF DOCTORS AFTER 1971

114. As stated early in our Report, we have terminated at 1971 our estimates of the likely future expansion of medical practice. We realise, however, that it might be of assistance to those who have to consider the implications of the results of our investigations if they could have some indication of likely events after 1971. Paragraph 5 of Appendix 3 shows that the age distribution of the existing doctors is such that the numbers of new doctors required to offset death and retirement are likely to rise from 1975 and the estimates for these are:—

1970-1975	...	...	...	...	1,260 per annum
1975-1980	...	...	...	...	1,480 per annum
1980-1985	...	...	...	...	1,670 per annum
1985-1990	...	...	...	...	1,710 per annum

As regards the expansion of medical practice after 1971, our view, for what it is worth, is that there is no reason for supposing that the rate of expansion during the years immediately following 1971 will be significantly different from that in the years just before. On this assumption, the figures suggest that any reduction in the output of medical graduates which may be brought into effect after 1961 would have to be restored about 1975 and that by about 1980 output would have to be raised by some 200 per annum above the current average level of 1,825. These indications of possible future trends are, however, highly speculative and we have suggested earlier in our Report that a further review may have to be undertaken.

X. GENERAL CONCLUSIONS

115. Speculative though so many of our assumptions, estimates and calculations have necessarily been, we believe that certain broad conclusions emerge from them as follows:—

- (1) Up to the present the medical schools in Great Britain have not been producing too many doctors.

- (2) Up to 1961 output from the medical schools is already substantially determined by the numbers of students now at various stages of training. After that year, however, a reduced output will suffice. Our estimates suggest that a reduction of the student intake by about a tenth, from as early a date as is practicable, would meet the case.
- (3) About 1975 an increased output of doctors is likely to be needed and the student intake would therefore require to be raised from about 1970. This forecast is, however, so speculative that it would seem prudent for there to be another review of the situation in about ten years' time.

HENRY WILLINK (*Chairman*).

JOHN T. BALDWIN.

HAROLD BOLDERO.

JOHN A. CHARLES.

COHEN OF BIRKENHEAD.

ANDREW DAVIDSON.

A. B. DAVIES.

J. P. DODDS.

GEOFFREY JEFFERSON.

L. G. K. STARKE.

ALEX B. TAYLOR.

PHILIP MUSTON, *Secretary*.

2nd August, 1957.

APPENDIX 1

LIST OF ORGANISATIONS AND INDIVIDUALS WHO SUBMITTED MEMORANDA OR GAVE INFORMATION AT THE COMMITTEE'S REQUEST

(Those marked with an asterisk also gave oral evidence)

Universities, Royal Colleges, etc.

Committee of Vice-Chancellors and Principals.
Royal College of Physicians of London.
Royal College of Surgeons of England.
Royal College of Obstetricians and Gynaecologists.
General Medical Council.
Medical Research Council.
College of General Practitioners.
Post-graduate Medical School of London.
British Post-graduate Medical Federation.
Deans of medical schools in Great Britain.

Medical Organisations

Association of Certifying Factory Surgeons.
Association of Industrial Medical Officers.
*British Medical Association.
British Medical Association (Scottish Committee).
Conference of medically qualified non-clinical professors.
General Practice Reform Association.
Joint Tuberculosis Council.
*Medical Practitioners' Union.
Medical Women's Federation.
Regional Hospital Consultants and Specialists Association (non-undergraduate teaching hospitals).
Society of Medical Officers of Health (England and Wales).
Society of Medical Officers of Health (Scotland).

National Health Service Administrative Bodies

Association of Scottish Executive Councils.
Association of Welsh Executive Councils.
Executive Councils Association (England).
Executive Council of Birmingham.
Executive Council of Dorset.
Executive Council of Kent and Canterbury.
Executive Council of London.
*Medical Practices Committee (England and Wales).
*Medical Practices Committee (Scotland).
Regional Hospital Board—Birmingham.
Regional Hospital Board—North West Metropolitan.
Regional Hospital Board—Sheffield.

Local Authority Organisations

Association of County Councils in Scotland.
Association of Municipal Corporations.
County Councils Association.
London County Council.

Government Departments

Admiralty.
Air Ministry.
Board of Control (England and Wales).
*Colonial Office.
Commonwealth Relations Office.
*Ministry of Education.
Ministry of Power.
*Ministry of Health.
*Ministry of Labour and National Service.

Government Departments—*cont.*

Ministry of Pensions and National Insurance.

Ministry of Supply.

Ministry of Transport and Civil Aviation.

Prison Commission.

Treasury.

University Grants Committee.

War Office.

*Department of Health for Scotland.

General Board of Control (Scotland).

Ministry of Health and Local Government, Northern Ireland.

Others

Association of the British Pharmaceutical Industry.

Conference of Missionary Societies of Great Britain.

Medical Missionary Society.

Robert Ellis, Esq., B.A., M.D.

J. H. Grove-White, Esq., B.A., M.D.

R. Atkinson Stoney, Esq., F.R.C.S.(I).

APPENDIX 2

Civilian doctors in Great Britain, June 1955

(see paragraphs 11-17)

<i>Age Group</i>	<i>Active</i>	<i>Retired</i>	<i>Total</i>	<i>Proportion active (per cent)</i>
MEN				
Under 30	5,640	400	5,650	99
30-34	7,800		7,810	
35-39	6,740		6,770	
40-44	5,990		6,010	
45-49	4,650		4,700	
50-54	3,790	340	3,830	88
55-59	4,490		4,730	
60-64	2,480		2,820	
65-69	1,640	750	2,390	69
70 and over	1,740	2,950	4,690	37
Total	44,960	4,440	49,400	
WOMEN				
Under 30	2,000	350	2,350	85
30-34	1,450	620	2,070	70
35-39	1,030	340	1,370	75
40-44	830	280	1,110	
45-49	610	100	710	85
50-54	660	120	780	
55-59	1,110	470	1,580	70
60-64	380	260	640	60
65-69	140	180	320	45
70 and over	90	380	470	20
Total	8,300	3,100	11,400	
MEN AND WOMEN				
Active ... ..	...	...	53,260	
Retired ... ..	...	...	7,540	
Total ... ..	...	...	60,800	

APPENDIX 3

Replacement of wastage in the existing medical population

Note by the Government Actuary's Department

1. The Committee asked for an estimate of the average annual intake of newly-qualified doctors that would be required to maintain the active medical population at the 1955 figure of 53,260. The "proportions active" in each group in 1955 were to be those shown in Appendix 2. At ages under 60 these were to be assumed to continue unchanged in future years; at ages 60 and over they were to decline as follows:—

Age Group	Men		Women	
	1955	1988	1955	1988
	(per cent)		(per cent)	
60-64	from	88 to 80	from	60 to 55
65-69	"	69 " 35	"	45 " 25
70 and over ...	"	37 " 15	"	20 " 10

In accordance with the Committee's view that the downward movement between 1955 and 1988 would be smooth and regular, it has been assumed that the "proportions active" in each age group will decline at a constant annual percentage rate.

2. The method adopted has been to project the 1955 total populations (i.e. both active and retired) of each sex by means of five-year survival factors based on a mortality decrement only, and to multiply the numbers of survivors so obtained by the "proportions active" appropriate to the point of time reached. A study of the occupational mortality statistics published in connexion with successive population censuses shows that in some years, and in some age groups, the death-rates experienced by members of the medical profession have been somewhat less than those of the population in general, while in other years or in other age-groups they have been somewhat greater. The differences are fairly small in all cases, and the mortality rates at the younger ages are now so low that considerable variations in them do not markedly affect the probability of survivorship over a limited period. In these circumstances the survivors in future years of the 1955 medical population can be estimated quite simply by applying the factors employed by the Government Actuary in his most recent forecast of the future population of England and Wales in 1960, 1965, (General Register Office, Quarterly Return No. 428). These estimates make no allowance for migration, which is dealt with separately in the Committee's Report.

3. When the appropriate "proportions active" have been applied, the estimated numbers of active doctors of both sexes at five yearly intervals during the twenty years from 1955 are as follows:—

Age Group	Estimated numbers active in				
	1955	1960	1965	1970	1975
Under 30	7,640				
30-34	9,250	7,340			
35-39	7,770	9,260	7,410		
40-44	6,820	7,680	9,170	7,340	
45-49	5,260	6,750	7,630	9,170	7,450
50-54	4,450	5,070	6,540	7,400	8,920
55-59	5,600	3,970	4,550	5,880	6,670
60-64	2,860	4,490	3,180	3,620	4,620
65-69	1,780	1,750	2,550	1,650	1,720
70 and over ...	1,830	1,430	1,280	1,480	1,330
Total... ..	53,260	47,740	42,310	36,540	30,710
Wastage	5,520	5,430	5,770	5,830	

4. In calculating the numbers of newly-qualified doctors required to make good the wastage indicated at the foot of the table, it has been assumed that qualification is at age 25, that the new entrants will experience the same wastage

rates as existing doctors, and that the number of men and women entrants will be such as to accord with the ratio of 4:1 on entry to the medical schools. The estimated new entrant requirements are as follows:—

	<i>Required annual average intake</i>					
1955-60	1,150
1960-65	1,180
1965-70	1,230
1970-75	1,260

5. The run of these figures might seem to suggest that by 1975 the required annual average intake will be approaching stability at a figure of 1,300 or slightly less. This, however, is not the case. The population of doctors at the present time contains a high proportion of young doctors, and as these move forward to the older ages at which deaths and retirements mainly occur the total volume of wastage will increase. Further, the assumptions regarding the "proportions active" imply that the proportions of doctors retiring at each age from 60 onwards will increase year by year until 1988. An extension of the calculations indicates that after 1975 the average annual intake requirements will, in fact, for a time increase very rapidly; they are estimated at about 1,480 in 1975-80, 1,670 in 1980-85 and 1,710 in 1985-90. Thereafter they may begin to decline, but considerable fluctuations are still to be expected. It will be realised that these long-term estimates are not put forward as forecasts; they merely give the arithmetical result of extending calculations based on the assumptions employed in dealing with a shorter period.